

METHODS AND APPARATUS TO REDUCE SEAL  
RUBBING WITHIN GAS TURBINE ENGINES

ABSTRACT OF THE DISCLOSURE

A method facilitates assembling a seal assembly for a gas turbine engine rotor assembly. The method comprises coupling a disk retainer to a first stage disk, and coupling an interstage seal assembly including an outer shell within the rotor assembly such that a downstream arm extending from the outer shell engages a second stage disk while an upstream arm extending from the outer shell engages the disk retainer.